

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Mariann SUNDBERG et al

Art Unit:

Application No:

Examiner:

Filed:

For: COPPER ALLOY AND METHOD FOR ITS
MANUFACTURE

PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

Please make the following amendments to this application
prior to examination thereof.

DESCRIPTION AMENDMENTS

Rewrite the paragraph beginning on page 3, line 9, to read as follows:

The invention is described in details in the following example ~~and in the following~~ with reference to the drawing where , the single figure of which is a graph illustrating the effect of the process steps on the electrical conductivity is illustrated of an alloy in accordance with the invention.

Rewrite the paragraph beginning on page 3, line 15, to read as follows:

The alloy in accordance with the invention having ~~0,2%~~ 0.2% by weight chromium, rest copper, was first cast using a continuous strip cast. After casting the electrical conductivity was measured and the value was 50% IACS. The strip cast alloy was then cold rolled to the thickness of less than ~~0,1~~ 0.1 mm and the value for the electrical conductivity was 50% IACS. The rolled alloy was then annealed at the temperature of 750° C for 5 seconds. After this annealing step the electrical conductivity had a value of 56% IACS. The alloy was again cold rolled to the final dimension of 0.05 mm and the value of the electrical conductivity was 61% IACS. The brazing was then done for the final product at the temperature of 625° C. After brazing the value for the electrical conductivity was again measured and the value was 94% IACS.

Rewrite the paragraph beginning on page 3, line 27, to read as follows:

The yield strength of the fins made of the copper alloy of the invention after brazing was 250 MPa and the fins were not recrystallized. The above described variation of the electrical conductivity is illustrated in ~~Fig. 1. In Fig. 1 there is the drawing.~~ The drawing also illustrated illustrates as a comparison the theoretical conductivity. The theoretical values are calculated from the equilibrium diagram for the copper-chromium system. The curves show the influence of chromium in solid solution on electrical conductivity. The

influence of cold deformation is taken from the relation between electrical conductivity for low-alloyed copper and reduction during cold deformation. The alloy manufactured by the method of the invention has 10% IACS better conductivity after brazing than the theoretical conductivity.